

**Claim Amendments**

1-33. (canceled)

34. (currently amended) ~~The~~ A zinc-containing optical glass ~~according to claim 33, wherein the~~ with a refractive index ( $n_d$ ) ~~is~~ being in the range of from about 1.60 to about 1.63 and ~~the an~~ Abbe number ( $V_d$ ) ~~is~~ being in the range of from about 43 to about 47, and said zinc-containing optical glass ~~comprises~~ comprising, on an oxide basis, the composition of:

<u>Material</u>	Percentage <u>by weight</u>
SiO <sub>2</sub>	40 - 47
ZnO	32 - 41
PbO	5 - 14
sum of ZnO+PbO	40 - 48
Li <sub>2</sub> O	0 - <3
Na <sub>2</sub> O	0 - 12
K <sub>2</sub> O	0 - 10
sum of Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O	≥2
F	0 - 3
MgO	0 - 6

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CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B <sub>2</sub> O <sub>3</sub>	0 - <1
Al <sub>2</sub> O <sub>3</sub>	0 - <1.5
ZrO <sub>2</sub>	0 - <2.

35-45. (canceled)

46. (currently amended) ~~The~~ A zinc-containing optical glass ~~according to claim 45, wherein the~~ with a refractive index ( $n_d$ ) is being in the range of from about 1.54 to about 1.64 and ~~the an~~ Abbe number ( $V_d$ ) ~~is~~ being in the range of from about 40 to about 52, and said zinc-containing optical glass ~~consists~~ consisting of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO <sub>2</sub>	39 - 54
ZnO	12 - 41
PbO	6 - 22
sum of ZnO+PbO	31 - 52
Li <sub>2</sub> O	0 - <3

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Na <sub>2</sub> O	0 - 13
K <sub>2</sub> O	0 - 11
sum of Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B <sub>2</sub> O <sub>3</sub>	0 - <1
Al <sub>2</sub> O <sub>3</sub>	0 - <1.5
ZrO <sub>2</sub>	0 - <2

≥0% by weight of at least one refining agent.

47. (currently amended) ~~The~~ A zinc-containing optical glass ~~according to claim 45, wherein the~~ with a refractive index ( $n_d$ ) ~~is~~ being in the range of from about 1.56 to about 1.63 and ~~the an~~ Abbe number ( $V_d$ ) ~~is~~ being in the range of from about 42 to about 52, ~~and~~ said zinc-containing optical glass ~~consists~~ consisting of, on an oxide basis, the composition of:

<u>Material</u>	Percentage <u>by weight</u>
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SiO <sub>2</sub>	40 - 55
ZnO	26 - 41
PbO	1 - 16
sum of ZnO+PbO	31 - 48
Li <sub>2</sub> O	0 - <3
Na <sub>2</sub> O	0 - 12
K <sub>2</sub> O	0 - 10
sum of Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B <sub>2</sub> O <sub>3</sub>	0 - <1
Al <sub>2</sub> O <sub>3</sub>	0 - <1.5
ZrO <sub>2</sub>	0 - <2

≥0% by weight of at least one refining agent.

48. (currently amended) ~~The~~ A zinc-containing optical glass  
~~according to claim 45, wherein the~~ with a refractive index ( $n_d$ ) ~~is~~  
being in the range of from about 1.60 to about 1.63 and ~~the~~ an Abbe

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number ( $V_d$ ) is being in the range of from about 43 to about 47, and  
said zinc-containing optical glass ~~consists~~ consisting of, on an oxide  
basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO <sub>2</sub>	40 - 47
ZnO	32 - 41
PbO	5 - 14
sum of ZnO+PbO	40 - 48
Li <sub>2</sub> O	0 - <3
Na <sub>2</sub> O	0 - 12
K <sub>2</sub> O	0 - 10
sum of Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B <sub>2</sub> O <sub>3</sub>	0 - <1
Al <sub>2</sub> O <sub>3</sub>	0 - <1.5

ZrO<sub>2</sub> 0 - <2

≥0% by weight of at least one refining agent.

49. (currently amended) ~~The~~ A zinc-containing optical glass ~~according to claim 45, wherein the~~ with a refractive index ( $n_d$ ) ~~is~~ being in the range of from about 1.57 to about 1.59 and ~~the~~ an Abbe number ( $V_d$ ) ~~is~~ being in the range of from about 48 to about 52, and said zinc-containing optical glass ~~consists~~ consisting of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO <sub>2</sub>	41 - 50
ZnO	30 - 40
PbO	0 - 1
sum of ZnO+PbO	31 - 41
Li <sub>2</sub> O	0 - <3
Na <sub>2</sub> O	0 - 11
K <sub>2</sub> O	0 - 10
sum of Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O	≥2
F	0 - 3
MgO	0 - 6

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CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B <sub>2</sub> O <sub>3</sub>	0 - <1
Al <sub>2</sub> O <sub>3</sub>	0 - <1.5
ZrO <sub>2</sub>	0 - <2

≥0% by weight of at least one refining agent.

50-54. (canceled)

55. (currently amended) ~~The~~ A zinc-containing optical glass ~~according to claim 54, wherein the~~ with a refractive index ( $n_d$ ) ~~is~~ being in the range of from about 1.54 to about 1.64 and ~~the an~~ Abbe number ( $V_d$ ) ~~is~~ being in the range of from about 40 to about 52, ~~and~~ said zinc-containing optical glass ~~consists~~ consisting of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO <sub>2</sub>	39 - 54
ZnO	12 - 41
PbO	6 - 22
sum of ZnO+PbO	31 - 52

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Li <sub>2</sub> O	0 - <3
Na <sub>2</sub> O	0 - 13
K <sub>2</sub> O	0 - 11
sum of Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B <sub>2</sub> O <sub>3</sub>	0 - <1
Al <sub>2</sub> O <sub>3</sub>	0 - <1.5
ZrO <sub>2</sub>	0 - <2
Cs <sub>2</sub> O	0 to about 2.5;

0 to about 5% by weight of one member of the group and combinations thereof: Rb<sub>2</sub>O, La<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>, and GeO<sub>2</sub>;

≥0% by weight of a coloring component; and

≥0% by weight of at least one refining agent.

56. (currently amended) ~~The~~ A zinc-containing optical glass ~~according to claim 54, wherein the~~ with a refractive index ( $n_d$ ) is being in the range of from about 1.56 to about 1.63 and ~~the~~ an Abbe



number ( $V_d$ ) is being in the range of from about 42 to about 52, and said zinc-containing optical glass ~~consists~~ consisting of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO <sub>2</sub>	40 - 55
ZnO	26 - 41
PbO	1 - 16
sum of ZnO+PbO	31 - 48
Li <sub>2</sub> O	0 - <3
Na <sub>2</sub> O	0 - 12
K <sub>2</sub> O	0 - 10
sum of Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B <sub>2</sub> O <sub>3</sub>	0 - <1
Al <sub>2</sub> O <sub>3</sub>	0 - <1.5

ZrO<sub>2</sub> 0 - <2

Cs<sub>2</sub>O 0 to about 2.5;

0 to about 5% by weight of one member of the group and combinations thereof: Rb<sub>2</sub>O, La<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>, and GeO<sub>2</sub>;

≥0% by weight of a coloring component; and

≥0% by weight of at least one refining agent.

57. (currently amended) ~~The~~ A zinc-containing optical glass ~~according to claim 54, wherein the~~ with a refractive index ( $n_d$ ) is being in the range of from about 1.60 to about 1.63 and ~~the~~ an Abbe number ( $V_d$ ) ~~is~~ being in the range of from about 43 to about 47, and said zinc-containing optical glass ~~consists~~ consisting of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO <sub>2</sub>	40 - 47
ZnO	32 - 41
PbO	5 - 14
sum of ZnO+PbO	40 - 48
Li <sub>2</sub> O	0 - <3
Na <sub>2</sub> O	0 - 12

K <sub>2</sub> O	0 - 10
sum of Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B <sub>2</sub> O <sub>3</sub>	0 - <1
Al <sub>2</sub> O <sub>3</sub>	0 - <1.5
ZrO <sub>2</sub>	0 - <2
Cs <sub>2</sub> O	0 to about 2.5;

0 to about 5% by weight of one member of the group and combinations thereof: Rb<sub>2</sub>O, La<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>, and GeO<sub>2</sub>;

≥0% by weight of a coloring component; and

≥0% by weight of at least one refining agent.

58. (currently amended) ~~The~~ A zinc-containing optical glass ~~according to claim 54, wherein the~~ with a refractive index ( $n_d$ ) ~~is~~ being in the range of from about 1.57 to about 1.59 and ~~the~~ an Abbe number ( $V_d$ ) ~~is~~ being in the range of from about 48 to about 52, and said zinc-containing optical glass ~~consists~~ consisting of, on an oxide

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basis, the composition of:

<u>Material</u>	Percentage <u>by weight</u>
SiO <sub>2</sub>	41 - 50
ZnO	30 - 40
PbO	0 - 1
sum of ZnO+PbO	31 - 41
Li <sub>2</sub> O	0 - <3
Na <sub>2</sub> O	0 - 11
K <sub>2</sub> O	0 - 10
sum of Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B <sub>2</sub> O <sub>3</sub>	0 - <1
Al <sub>2</sub> O <sub>3</sub>	0 - <1.5
ZrO <sub>2</sub>	0 - <2
Cs <sub>2</sub> O	0 to about 2.5;

0 to about 5% by weight of one member of the group and combinations thereof:  $\text{Rb}_2\text{O}$ ,  $\text{La}_2\text{O}_3$ ,  $\text{Y}_2\text{O}_3$ , and  $\text{GeO}_2$ ;

$\geq 0\%$  by weight of a coloring component; and

$\geq 0\%$  by weight of at least one refining agent.

59-64. (canceled)

65. (new) The zinc-containing optical glass according to claim 46, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98;

up to a total of about 1% by weight of said at least one refining agent is present; and

said at least one refining agent is at least one member of the group and combinations thereof:  $\text{As}_2\text{O}_3$  and  $\text{Sb}_2\text{O}_3$ .

66. (new) The zinc-containing optical glass according to claim 47, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98;

up to a total of about 1% by weight of said at least one refining agent is present; and

said at least one refining agent is at least one member of the

group and combinations thereof:  $\text{As}_2\text{O}_3$  and  $\text{Sb}_2\text{O}_3$ .

67. (new) The zinc-containing optical glass according to claim 48, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98;

up to a total of about 1% by weight of said at least one refining agent is present; and

said at least one refining agent is at least one member of the group and combinations thereof:  $\text{As}_2\text{O}_3$  and  $\text{Sb}_2\text{O}_3$ .

68. (new) The zinc-containing optical glass according to claim 49, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98;

up to a total of about 1% by weight of said at least one refining agent is present; and

said at least one refining agent is at least one member of the group and combinations thereof:  $\text{As}_2\text{O}_3$  and  $\text{Sb}_2\text{O}_3$ .

69. (new) The zinc-containing optical glass according to claim 55, wherein the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least

about 0.98.

70. (new) The zinc-containing optical glass according to claim 55, wherein:

up to about 8% by weight of said coloring component is present;  
said coloring component is a member of the group and combinations thereof:  $\text{CuO}$ ,  $\text{Cr}_2\text{O}_3$ ,  $\text{CoO}$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{MnO}$ ,  $\text{NiO}$ , and  $\text{V}_2\text{O}_5$ ;  
and

said zinc-containing optical glass comprises an optical filter.

71. (new) The zinc-containing optical glass according to claim 55, wherein:

up to a total of about 1% by weight of said at least one refining agent is present;

said at least one refining agent is at least one member of the group and combinations thereof:  $\text{As}_2\text{O}_3$  and  $\text{Sb}_2\text{O}_3$ ; and

said zinc-containing optical glass comprises an optical element.

72. (new) The zinc-containing optical glass according to claim 56, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98;

up to about 8% by weight of said coloring component is present;

said coloring component is a member of the group and combinations thereof: CuO, Cr<sub>2</sub>O<sub>3</sub>, CoO, Fe<sub>2</sub>O<sub>3</sub>, MnO, NiO, and V<sub>2</sub>O<sub>5</sub>; and

said zinc-containing optical glass comprises an optical filter.

73. (new) The zinc-containing optical glass according to claim 56, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98;

up to a total of about 1% by weight of said at least one refining agent is present;

said at least one refining agent is at least one member of the group and combinations thereof: As<sub>2</sub>O<sub>3</sub> and Sb<sub>2</sub>O<sub>3</sub>; and

said zinc-containing optical glass comprises an optical element.

74. (new) The zinc-containing optical glass according to claim 57, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98;

up to about 8% by weight of said coloring component is present;

said coloring component is a member of the group and combinations thereof: CuO, Cr<sub>2</sub>O<sub>3</sub>, CoO, Fe<sub>2</sub>O<sub>3</sub>, MnO, NiO, and V<sub>2</sub>O<sub>5</sub>;



and

said zinc-containing optical glass comprises an optical filter.

75. (new) The zinc-containing optical glass according to claim 57, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98;

up to a total of about 1% by weight of said at least one refining agent is present;

said at least one refining agent is at least one member of the group and combinations thereof:  $\text{As}_2\text{O}_3$  and  $\text{Sb}_2\text{O}_3$ ; and

said zinc-containing optical glass comprises an optical element.

76. (new) The zinc-containing optical glass according to claim 58, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98;

up to about 8% by weight of said coloring component is present;

said coloring component is a member of the group and combinations thereof:  $\text{CuO}$ ,  $\text{Cr}_2\text{O}_3$ ,  $\text{CoO}$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{MnO}$ ,  $\text{NiO}$ , and  $\text{V}_2\text{O}_5$ ;

and

said zinc-containing optical glass comprises an optical filter.

77. (new) The zinc-containing optical glass according to claim 58, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98;

up to a total of about 1% by weight of said at least one refining agent is present;

said at least one refining agent is at least one member of the group and combinations thereof:  $\text{As}_2\text{O}_3$  and  $\text{Sb}_2\text{O}_3$ ; and

said zinc-containing optical glass comprises an optical element.